SOMERVILLE GREEN BUILDING PROJECT

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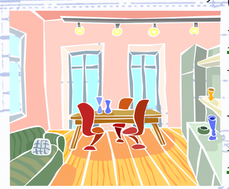
Green Building Concept: Any structure designed, built, renovated, operated, or reused with objectives to: (1) Protect occupant health; (2) Improve employee productivity; (3) Use wisely natural resources; and (4) Reduce the environmental impact

Do you know that…?

- We spend about 90% of our time in indoors .
- Many building products contain chemicals commonly known as Volatile Organic Compounds (VOCs), that emit harmful vapors over time.
- In a short time these vapors effect health. Runny nose, tearing of the eyes, and throat irritation are typical symptoms.
- Over time indoor chemical vapors from building materials may seriously impact reproductive health, increase the risk of cancer, and contribute to chronic respiratory illnesses like asthma.
- Children and elderly are more vulnerable to building material toxicity and indoor air pollution .



Sources for Indoor Toxins and Air Pollutants—Vapors from:

- Household cleaners, solvents, and paints.
- Plastic resins, rubbers, and insulation foams.
- plastic flooring, synthetic textiles in carpets, curtains and furniture.
- Glues/Adhesives, plywood, particleboard and polyurethane wood sealants.
- Pesticides used to spray indoor plants and pests.

Green Building Reality for —Construction/ Renovation

Foundation: Plan and implement proper waterproofing to avoid moisture responsible for ***mold growth.***

Framing: Good framing and high insulation values increasing thermal efficiency.

Heating Ventilation and Air Conditioning (HVAC): Seal combustion appliances and exhaust systems for proper venting of harmful gases such as carbon monoxide.

Interior Design: Consider products with LOW VOCs when purchasing wooden furniture, vinyl wallpapers, treated fabrics and linoleum flooring.

Paint: Use low or no VOC paints.

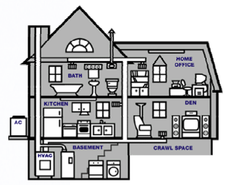
Carpet: Minimize carpet covered flooring. Frequent vacuuming maintains the carpet and lowers indoor air pollution. Avoid wall-to-wall carpets in bathrooms, kitchens, utility rooms, basements and stairways.

Avoid Formaldehyde Products:

- Formaldehyde is a colorless, pungent smelling gas that can have both short -term and long-term health impacts on adults and children.
- Formaldehyde can be found in pressed wood products, urea formaldehyde foam insulation and some types of glues.
- Several alternative products are available in market containing no formaldehyde, such as water based chemicals and wood products labeled as low emitting formaldehyde.

Green Building—Energy Perspective

- Use structural insulated panels for floors, walls and roof.
- Apply a water-heater jacket.
- Insulate hot water pipes.
- Convert gas to tank-less heater.
- Install compact fluorescent light bulbs (CFLs).



- Install fixtures with CFL.
- Install lighting controls.
- Install high efficiency ceiling fans with CFLs.
- Install household appliances with EPA's Energy Star Label.

Ref: http://www.energystar.gov

- Install floor insulation over crawl space.
- Install energy efficient windows.
- Ensure proper roof insulation and venting.
- Use duct mastic on all duct joints.
- Consider installing solar water heating system.
- Consider installing photovoltaic (PV) system.

Background of this picture reflects architectural and engineering drawings for "Congressman Michael E. Capuano Early Childhood Center" in Somerville, MA. This school is the first green school in the Massachusetts and it was funded $630,000 by Massachusetts Technology Collaborative (MTC) for its Green Building Design concepts.

ABOUT THE GREEN BUILDING PROJECT: The City of Somerville Environmental Protection Office, in collaboration with the Somerville Board of Health, Massachusetts Alliance for Portuguese Speakers (MAPS) and Somerville Commission on Energy Use and Climate Change, has initiated Somerville's Green Building Project. Our mission is to educate residents and business owners about the importance of indoor air quality, the impact of harmful chemicals used in the home and to encourage the adoption of Green Building concepts in new construction and renovation projects. This project is funded by the Toxics Use Reduction Institute (TURI) at the University of Massachusetts, Lowell. For more information contact Somerville Environmental Protection Office at (617) 625-6600 x 5070.